EQKIT

Tools you need:

①Iron (30W)
②Solder wire
③Multimeter
④Tweezers
⑤Wire cutters

Precautions:

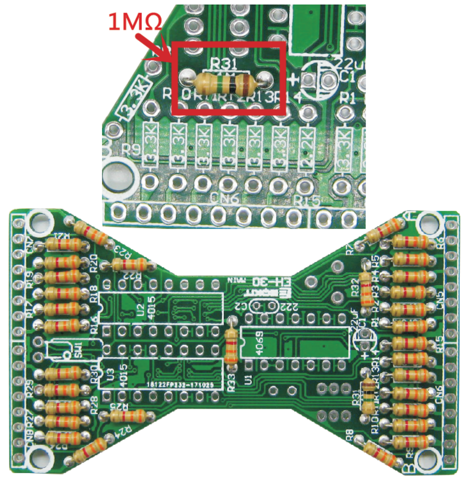
①Check part values & quantities against part list
②Always meter resistor values before soldering
③Understand all part polarities and orientations

EH-30 Electronic hourglass kit instructions

Rev. 1.0   2017.11.05   Produced by YiQi

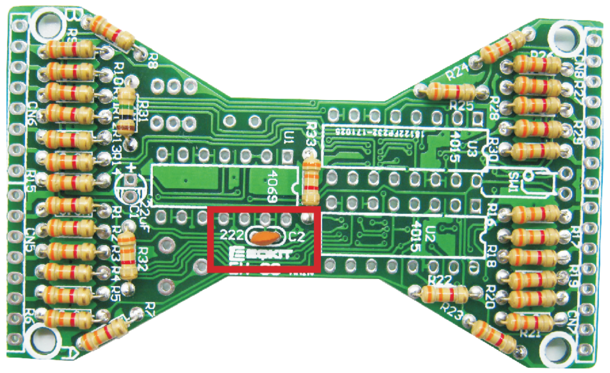
1. Install MAIN RES:R31=1MΩ

Other resistors are 3.3KΩ



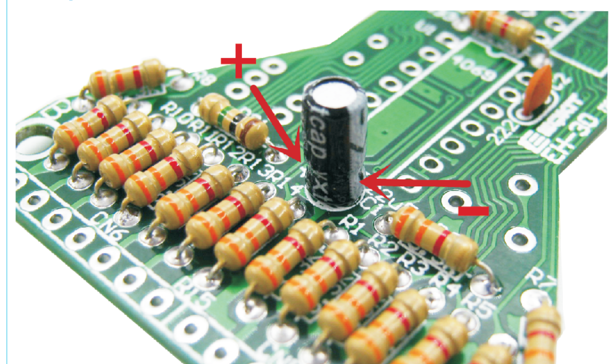
2. Install CAP:

C2=222P



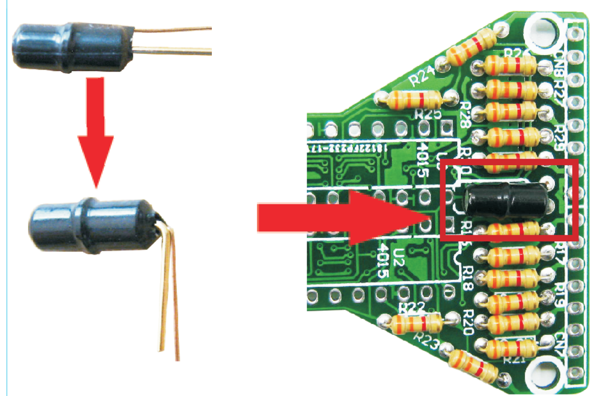
3. Install E-CAP:

C1=22uF,Notice that the positive electrode of electrolytic capacitor can not be reversed



4. Install Directional switch :

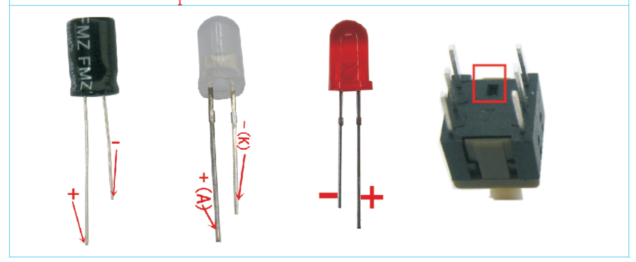
Bend the switch 90 degrees, and then install it to SW1



Warning

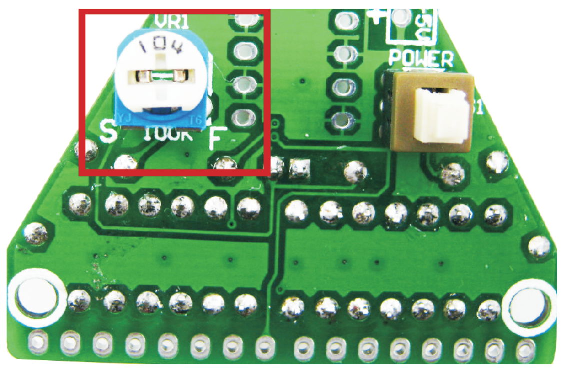
Light-emitting diode and electrolytic capacitor the longer pin is the anode it should be installed on the rectangle pad of PCB.

Refer to the picture below



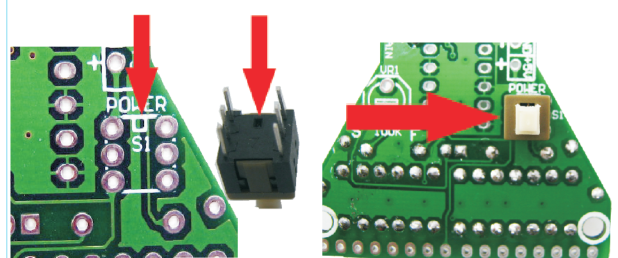
5. Install ADJ-RES:

VR1=104K,Note that the adjustable resistance should be soldered to the back of the circuit board



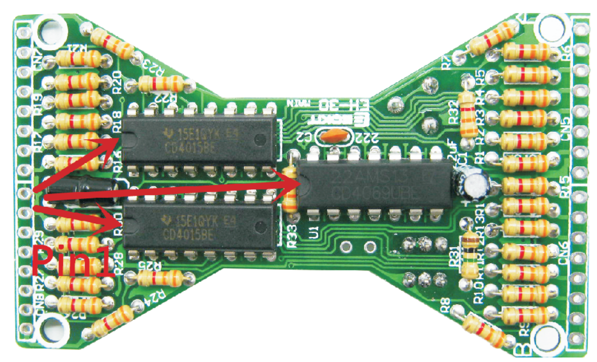
6. Install Power switch :

Pay attention to the installation direction of the switch



7. Install IC:Pay attention to the installation direction of IC.

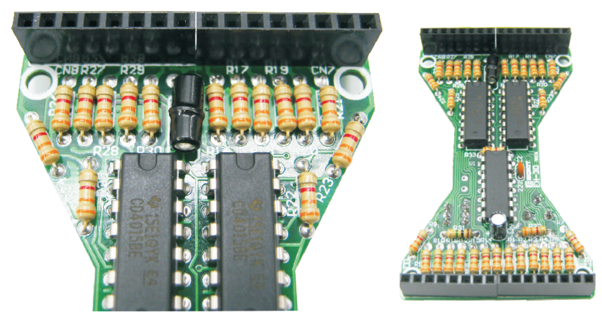
U1=CD4069.U2=U3=CD4015



8. Install 8pin Connector :

Refer to the picture below:

Install connector to CN5,CN6,CN7,CN8.

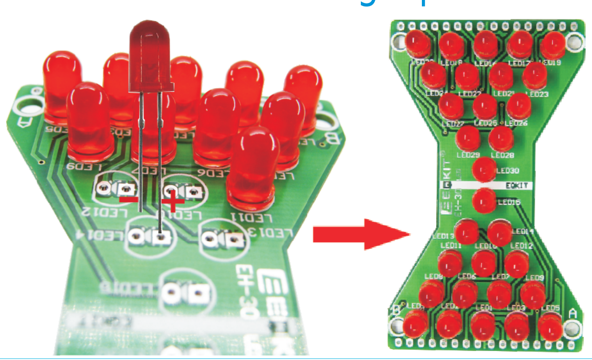


9. Install LED panel:

Install 30 LED on the circuit board

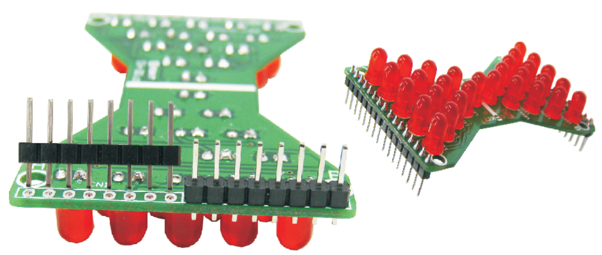
The long foot is the positive pole.

Install on the rectangle pad



10. Install pin connector :

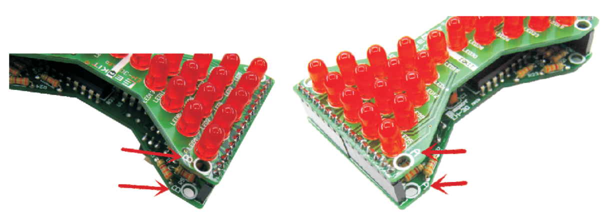
Install the short side of the connector to the back of the circuit board



11. Install main and LED:

Install the motherboard and LED gently press together

A point to A , B point to B



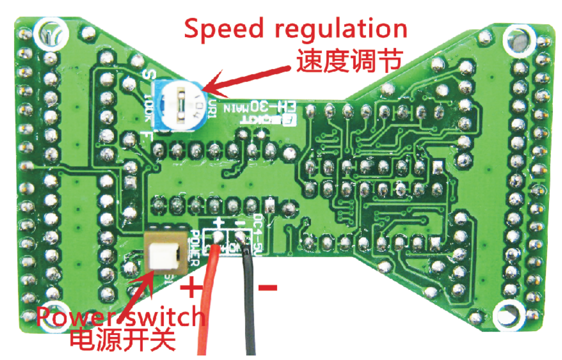
12.Welding power cable

Red line is positive power supply.Welding to +5V

The black line is the ground wire.Welding to GND.

Power supply DC5V.Suitable for USB.

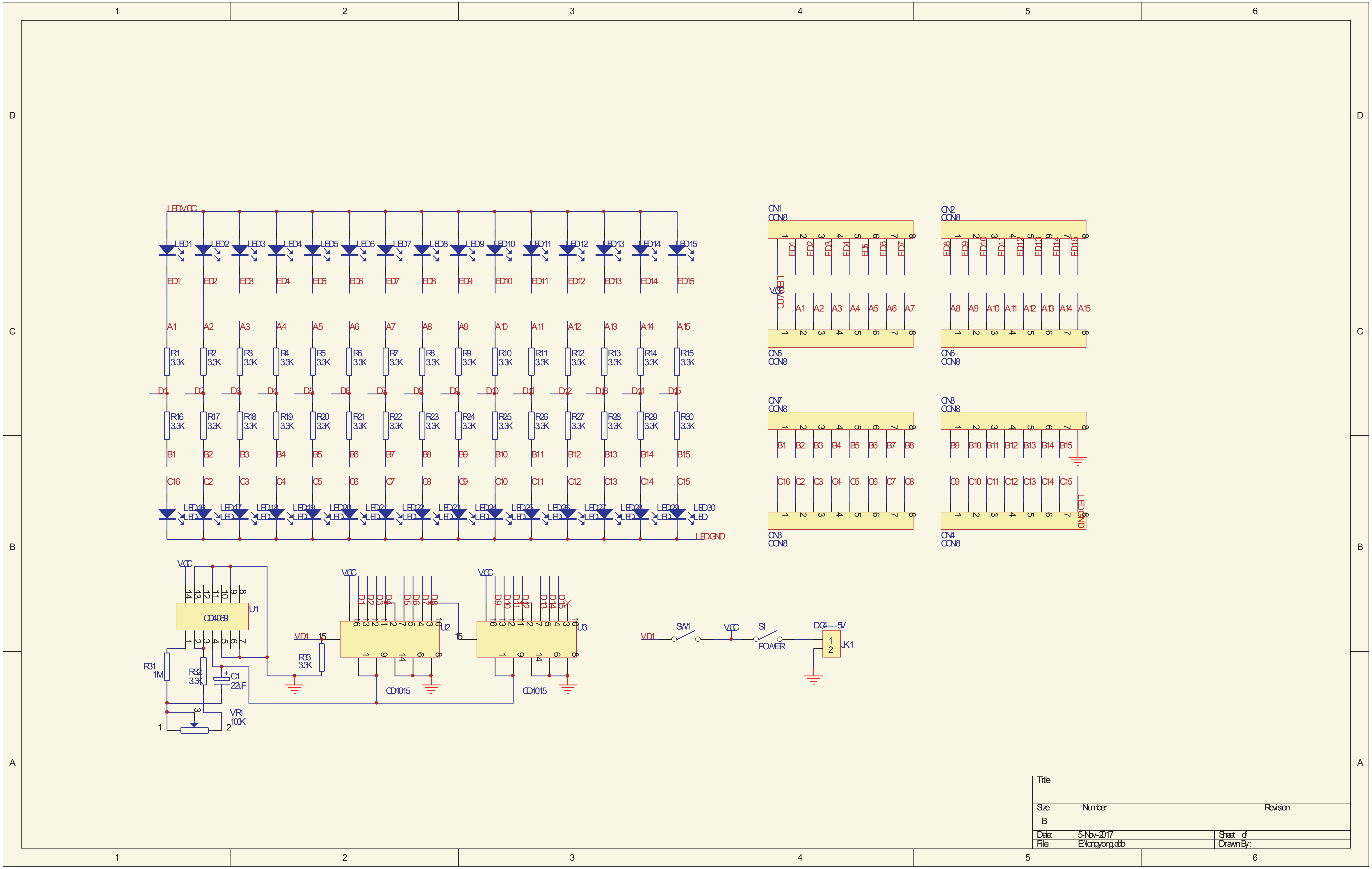
3 section AA or AAA battery box



Installation list

EH-30 Electronic hourglass component list

NO.	Name	Parameter	QTY
R1—R30. R32. R33	RES	3.3K	32
R31	RES	1M	1
C2	CAP	222P	1
C1	E-CAP	22uF	1
LED-LED30	LED	5mm	30
U1	IC	4069	1
U2. U3	IC	4015	2
SW1	Directional switch	SW300DA	1
S1	Power switch	6P Auto lock	1
VR1	ADJ-RES	100K	1
CN1—CN4	Connector	8P	4
CN5—CN8	Connector	8P	4
—	PCB	EH-30-MAIN	1
—	PCB	EH-30-LED	1


LEDVCC
LED1 LED2 LED3 LED4 LED5 LED6 LED7 LED8 LED9 LED10 LED11 LED12 LED13 LED14 LED15
ED1 ED2 ED3 ED4 ED5 ED6 ED7 ED8 ED9 ED10 ED11 ED12 ED13 ED14 ED15
A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A12 A13 A14 A15
R1 R2 R3 R4 R5 R6 R7 R8 R9 R10 R11 R12 R13 R14 R15
3.3K
D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12 D13 D14 D15
R16 R17 R18 R19 R20 R21 R22 R23 R24 R25 R26 R27 R28 R29 R30
B1 B2 B3 B4 B5 B6 B7 B8 B9 B10 B11 B12 B13 B14 B15
C16 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15
LED16 LED17 LED18 LED19 LED20 LED21 LED22 LED23 LED24 LED25 LED26 LED27 LED28 LED29 LED30
LED
LEDGND
CN1 CON8
CN2 CON8
CN5 CON8
CN6 CON8
CN7 CON8
CN8 CON8
CN3 CON8
CN4 CON8
VCC
U1 CD4069
R31 1M
R32 3.3K
C1 22uF
VR1 100K
VD1
R33 3.3K
U2 CD4015
U3 CD4015
SW1
S1 POWER
DC4---5V
JK1
Title
Size B
Number
Revision
Date: 5-Nov-2017
File E:\longyong.ddb
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Drawn By: